

EXHIBIT 51

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION**

**Intellectual Ventures I LLC and
Intellectual Ventures II LLC,**

Plaintiffs,

v.

VMware, Inc.,

Defendant.

Civil Action No. 6:19-cv-01075-ADA

SUPPLEMENTAL DECLARATION OF DR. ALEX SNOEREN

I, Alex C. Snoeren, hereby declare as follows:

1. I incorporate by reference as if fully set forth herein my declaration submitted as Exhibit 2 to VMware's opening claim construction brief.

2. I understand the IV's expert Dr. Madisetti opined that "importing two additional structural limitations ("the physical interface") would be improper since connections could readily be understood in the art as logical or virtual, as opposed to physical." I disagree.

3. In order to perform "maintaining a connection, over a network fabric, to a virtual storage network interface layer of an application server," a POSITA would know that the connection over the network fabric includes a physical interface at both ends of the network fabric, and that the "connection" is between the claimed virtual I/O server and the application server. Both the application server and the virtual I/O server must have a physical interface in order to communicate with each other across the network fabric.

4. Moreover, the '818 patent discloses:

Virtual I/O server 106 provides the storage and external networking needs of application servers 102 connected to I/O switch fabric 104, allowing transparent, shared access to SAN I/O subsystems 114 and LAN I/O subsystems 116. Virtual

I/O server 106 creates virtual device interfaces for application servers 102 to access the I/O subsystems as if the I/O subsystems are directly connected to application servers 102.

'818 patent at 3:15-21. The only way for the “application servers 102 to access the I/O subsystems” is through a physical interface of the application server, over the network fabric, to a physical interface of the virtual I/O server.

5. The '818 patent discloses “[i]nserted into the network and storage protocol stacks are virtual interface drivers configured to intercept storage and network I/O messages, at the device level, and pass them through the I/O fabric interface to a virtual I/O server 106 for processing.” '818 Patent at 4:2-6. This is consistent with both the application server and virtual I/O server having a physical interface because they are required in order to attach to the I/O fabric over which the messages are passed.

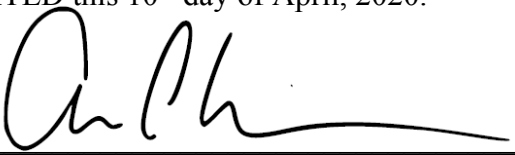
6. The '818 patent discloses the “virtual network interface, in one implementation, emulates an Ethernet NIC [and] plugs in at the bottom of the network stack.” '818 Patent at 4:9-13. This disclosure is irrelevant to whether a POSITA would have known that the physical interfaces of the application server and virtual I/O server connect over a network fabric.

7. The essential elements of HTB are captured at 10:15-29, 10:31-36 of the '818 patent. This portion of the patent confirms that the inventors' understanding of HTB was consistent with the use of the term in the art. HTB is and was a standard approach to providing differing guarantees to disparate classes of traffic. It has been implemented in a consistent manner across many different platforms and systems prior to the '818, including both the kernel of the Linux operating system and the system for managing wireless 802.11 traffic described in Valenzuela et al., both of which are cited on the face of the '818. In my declaration in support of VMware's opening claim construction brief I mapped explicitly between the explanation of HTB in the patent

specification and the description provided in Valenzuela et al.—which was cited by both the examiner and the patentee—demonstrating there can be no doubt that the applicant meant to refer specifically to the same, well-known HTB algorithm.

I hereby declare that the foregoing is true and correct to the best of my knowledge subject to the laws of perjury of the United States.

DATED this 10th day of April, 2020.

A handwritten signature in black ink, appearing to read 'Alex C. Snoeren', written over a horizontal line.

Dr. Alex C. Snoeren